



July 19, 2018

Patrick Pulupa, Executive Officer  
Sue McConnell, Program Manager  
Central Valley Regional Water Quality Control Board  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670-6114

Re: East San Joaquin Water Quality Coalition Zone 2 Core/Represented site exchange

Dear Mr. Pulupa,

The East San Joaquin Water Quality Coalition (ESJWQC or Coalition) is requesting to update its MRP Order R5-2012-0116-R4 to 1) exchange the Zone 2 Core site, Prairie Flower Drain @ Crows Landing Rd, with Westport Drain @ Vivian Rd and 2) monitor Prairie Flower Drain @ Crows Landing Rd as a Represented site in Zone 2 beginning in October 2018. Details and rationale for the site exchange request are below.

## **PRAIRIE FLOWER DRAIN @ CROWS LANDING RD**

### **Monitoring Location and History**

Prairie Flower Drain @ Crows Landing Rd is a rotating Core site located in Zone 2. Dairies and feedlots are common in this part of the Coalition region and this drain receives runoff immediately upstream from farmland managed by dairies. Upstream agriculture is primarily field crops and pasture. The water table in this site subwatershed is very shallow and the groundwater is high in salt. In addition to receiving surface water runoff, Prairie Flower Drain intercepts shallow groundwater and moves it to Harding Drain where it then flows to the San Joaquin River. The site subwatershed consists of 3,126 acres (DWR 2014 crop acreage data) of primarily field crops, pastureland, dairies, and feedlots (Figure 1). The map in Figure 1 utilizes older land use data from 2011; however, the map reflects the relative number and location of dairy parcels currently in the site subwatershed. Changes to membership since the map was

created include two parcels that are no longer enrolled in both the Coalition and dairy programs and are now exclusively enrolled in the dairy program.

Monitoring at Prairie Flower Drain @ Crows Landing Rd (37.44187, -121.00331) began in 2005 and has continued through the 2018 Water Year (WY). The site was monitored from 2005 through 2008 during the irrigation and storm season. In 2011, the site rotated to Assessment Monitoring for two years under the 2008 Monitoring and Reporting Program Plan (MRPP) where the full suite of constituents were monitored monthly (pesticides, metals, nutrients, pathogens, physical parameters, pathogens, and water column toxicity; sediment toxicity samples collected in storm and irrigation seasons). Beginning in 2014, the site was monitored monthly as one of the rotating Core sites in Zone 2. Monitoring occurs monthly every two years at Prairie Flower Drain @ Crows Landing Rd. Lateral 5 ½ @ South Blaker Rd is the second alternating Zone 2 Core site. Core sites are monitored for constituents identified in the annual Monitoring Plan Update (MPU).

The Coalition received approval for the completion of management plans at Prairie Flower Drain @ Crows Landing Rd for dimethoate (approved April 14, 2017) and toxicity to *P. promelas* (approved March 25, 2016). Current management plan constituents include DO, pH, SC, ammonia, nitrate/nitrite, *E. coli*, chlorpyrifos, molybdenum, and toxicity to *C. dubia* and *S. capricornutum*. Due to exceedances since the approval for management plan completion (approved May 30, 2012), pH and chlorpyrifos management plans have both been reinstated.

### **Rationale for Requesting to Exchange Core Site Location**

The Coalition has monitored Prairie Flower Drain @ Crows Landing Rd for over 13 years. The Coalition performed focused outreach for six years in the site subwatershed (2008-2010 and 2016-2018) in an effort to address water quality impairments. During focused outreach all ESJWQC members in the subwatershed were contacted, Coalition representatives assessed management practices implemented on member parcels, and made recommendations for additional practices as necessary. Subsequently, members implemented numerous practices recommended during focused outreach to improve water quality. Despite focused outreach and management practice implementation efforts, water quality impairments continue to occur. Similar focused outreach efforts in site subwatersheds with limited dairy inputs (Dry Creek @ Wellsford Rd and Dry Creek @ Rd 18) have been successful in completing all pesticide and toxicity management plans. The main difference between these watersheds being the percentage of dairy acreage. Dairy members receive no outreach and have no requirement to eliminate the discharge of pesticides; therefore, there is no improvement in overall water quality.

The Coalition was notified by Regional Board dairy enforcement staff concerning illegal dairy discharge in the site subwatershed on January 28, 2011, February 4, and 8, 2011. Illegal dairy lagoon discharges and applications of pesticides and herbicides to dairy fields can result in

toxicity and contribute to exceedances of WQTLs. Furthermore, samplers have consistently observed organic matter from dairies in the drain such as dead cows and floating manure as well as strong odor of methane (Table 1).

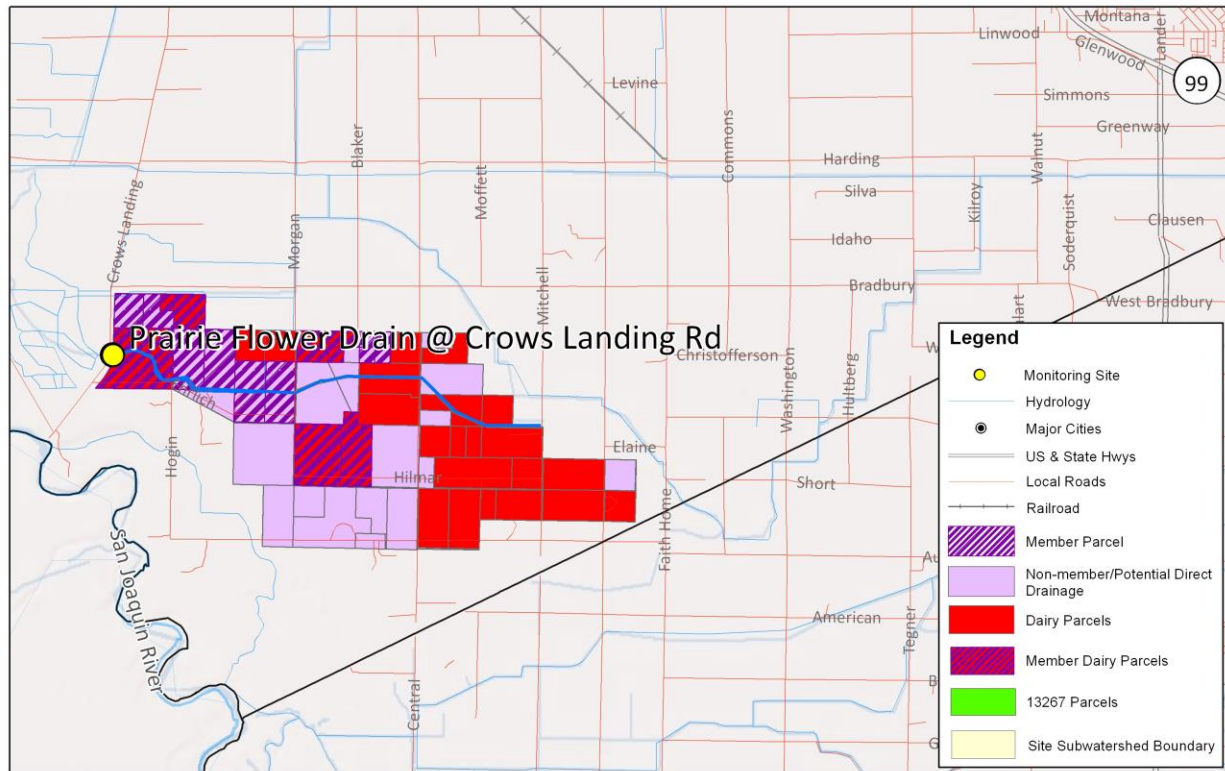
On October 29, 2015, the Coalition performed additional outreach to all dairy members in the site subwatershed in a joint effort between the Coalition, Western United Dairymen, and Central Valley Dairy Representative Monitoring Program; however, Coalition representatives were met with resistance during the discussion and this combined focused outreach effort did not result in water quality improvements.

The Coalition requests to begin monitoring in October 2018 at the new proposed rotating Core site, Westport Drain @ Vivian Rd, for the 2019 WY and future monitoring events. Figure 2 and 3 document the consistent conditions of the Prairie Flower Drain waterbody.

**Table 1. Field observations at Prairie Flower Drain.**

SITE SUBWATERSHED	STATION CODE	SAMPLE DATE	FIELD OBSERVATIONS
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	3/1/2006	cow
		3/24/2006	cow
		5/23/2007	dairy Farm
		8/14/2007	sewage, cow manure
		9/18/2007	manure
		5/19/2009	dairy
		5/10/2011	sewage smell
		2/12/2013	manure
		11/12/2013	methane smell
		10/10/2017	dairy
		4/9/2018	dairy
Prairie Flower Drain @ Morgan Rd (site located upstream of Prairie Flower Drain @ Crows Landing Rd)	535XPFDMR	8/29/2006	manure
		4/22/2008	dead calf
		5/20/2008	decomposing calf

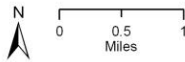
**Figure 1. Prairie Flower Drain @ Crows Landing Rd site subwatershed land use map.**



Source of Layers:  
 Hydrology - NHD hydrodata, 1:24,000-scale, <http://nhd.usgs.gov/>  
 Roads, highways, railroads, county boundary, city outlines - California Spatial Information Library  
 TPRS - Teale Public Land Survey System, Pub. date, 2000/10/1, California Spatial Information Library  
 Parcel Layer - Stanislaus 2010, Merced 2011, Madera 2011  
 Dairy Information: SVMCB 2008 Data  
 Basemap, Shaded Relief - ESRI  
 GSC North America 1983

Date Prepared: 10/25/11

ESJWQC



### Prairie Flower Drain @ Crows Landing Rd Member, Non-Member & Dairy Parcels

**Figure 2. Prairie Flower Drain @ Crows Landing Rd upstream site conditions.**

Photos taken during the most recent sampling event on June 19, 2018.



**Figure 3. Prairie Flower Drain @ Crows Landing Rd downstream site conditions.**

Photos taken during the most recent sampling event on June 19, 2018.





## WESTPORT DRAIN @ VIVIAN RD

### Monitoring Location and History

Westport Drain @ Vivian Rd is a Represented site located in Zone 2. The origin of Westport Drain is Turlock Lake via Turlock Main Canal. The site subwatershed consists of 1,745 acres (DWR 2014 crop acre data) of deciduous fruit and nut, field crops, pastureland, and some dairies (Figure 4). Figure 5 and 6 document conditions of the waterbody.

Monitoring at Westport Drain @ Vivian Rd (37.53682, -121.04861) began in 2007 and continued through 2008. The Coalition conducted focused outreach in the subwatershed from 2014 through 2016 and Management Plan Monitoring (MPM) for chlorpyrifos and water column toxicity to *S. capricornutum*. Represented sites are evaluated annually for monitoring based on Core site exceedances and management plans in the MPU.

The Coalition received approval for the completion of the chlorpyrifos (approved April 14, 2017) and toxicity to *S. capricornutum* management plans (approved January 31, 2018). Current management plan constituents include DO, pH, SC, nitrate/nitrite, *E. coli*.

### Rational for Core site exchange

Westport Drain @ Vivian Rd was selected as the best alternative Core site because:

1. the site subwatershed encompasses a wide variety of crops and is representative of the entire zone (Table 2),
2. Westport Drain is representative of other drains in Zone 2,
3. there is more irrigated agriculture and less dairy influence on water quality in the site subwatershed,
4. focused outreach efforts have been successful due to cooperation between members and Coalition representatives, and
5. Westport Drain @ Vivian Rd site subwatershed contains a greater percentage of member acreage than the Prairie Flower Drain @ Crows Landing Rd site subwatershed (40% vs 23%; respectively).

Table 2 includes a comparison of overall land use in Zone 2, land use between the two site subwatersheds, and member acreage. Data indicate the Westport Drain @ Vivian Rd site subwatershed encompasses a wider variety of crops and is more representative of the entire zone. The Coalition also requests to designate Prairie Flower Drain @ Crows Landing Rd as a Represented site and Westport Drain @ Vivian Rd as a rotating Core site in Zone 2 beginning in October 2018.

CROPS	ZONE 2		PRAIRIE FLOWER DRAIN @ CROWS LANDING RD		WESTPORT DRAIN @ VIVIAN RD			
	ACREAGE	CROP %	ACREAGE	CROP %	ACREAGE	CROP %		
DECIDUOUS FRUITS AND NUTS	57190	29%	NA	NA	531	30%		
FIELD CROPS	49286	25%	1865	60%	398	23%		
No CADWR Data (dairy and feedlot)	40579	21%	638	20%	299	17%		
URBAN	20446	10%	NA	NA	NA	NA		
PASTURE	16977	9%	451	14%	357	20%		
IDLE	3393	2%	22	1%	NA	NA		
TRUCK NURSERY AND BERRY CROPS	3222	2%	108	3%	NA	NA		
CITRUS AND SUBTROPICAL	147	1%	NA	NA	NA	NA		
RIPARIAN VEGETATION	420	1%	30	1%	NA	NA		
YOUNG PERENNIAL	179	1%	NA	NA	NA	NA		
GRAIN AND HAY CROPS	2057	1%	13	<1%	NA	NA		
VINEYARD	1885	1%	NA	NA	160	9%		
<b>Total Acreage</b>	<b>195,781</b>		<b>3126</b>		<b>1745</b>			
<b>Total Member Acreage</b>			<b>730</b>		<b>630</b>			
<b>Percentage Member Acreage</b>			<b>23%</b>		<b>40%</b>			

NA-Not applicable

**Westport Drain @ Vivian Rd**

**Legend**

- Monitoring Site
- Major Cities
- Hydrology
- Major Hways
- Local Roads
- RR
- ESJWQC Boundary

**Land Use**

- Citrus, I
- Deciduous Fruit, Nut, I
- Deciduous Fruit, Nut, NI
- Field Crops, I
- Grains, Hay, I
- Grains, Hay, NI
- Idle, I
- Idle, NI
- Pasture, I
- Pasture, NI
- Rice, I
- Truck, Nursery, Berry, I
- Vineyard, I
- Vineyard, NI
- Barren Wasteland, NI
- Riparian Vegetation, NI
- Wild Vegetation, NI
- Water Surface, NI
- Feedlot, Dairy, Farmstead, NI
- Golfcourse, Cemetery, Landscape, NI
- Urban, NI

**ESJWQC**

Coordinate System: NAD 1983 StatePlane California II FIPS 6403 Feet  
 Projection: NAD83 to NAD83  
 Units: Feet US

Westport Drain @ Vivian Rd

**Figure 5. Westport Drain @ Vivian Rd upstream site conditions.**

Photos taken during the last sampling event on April 13, 2017.



**Figure 6. Westport Drain @ Vivian Rd downstream site conditions.**

Photos taken during the last sampling event on April 13, 2017.





## SUMMARY OF REQUEST

The Coalition has conducted monitoring at Prairie Flower Drain @ Crows Landing Rd from 2005 through the 2018 WY. Less than a quarter of the site subwatershed acreage is irrigated agriculture that is enrolled in the ESJWQC (23% of site subwatershed, Table 2). Water quality impairments observed over the years for constituents such as ammonia, nitrate, salts, and *E. coli* indicate substantial dairy influence in the site subwatershed. Coalition representatives have conducted six years of focused outreach to members (2008-2010 and 2016-2018) and non-members (in 2015) in the site subwatershed. Members have implemented management practices designed to reduce discharge, while non-members were not receptive to outreach. Water quality has not improved. Focused outreach efforts in other subwatersheds with a larger percentage of member farming operations have been successful and water quality has improved.

The Coalition requests to exchange the Zone 2 Prairie Flower Drain @ Crows Landing Rd Core site for Westport Drain @ Vivian Rd because 1) the site subwatershed encompasses a wide variety of crops and is representative of the entire zone, 2) site is representative of other drains in the zone 3) there is less dairy influence on water quality in the site subwatershed, 4) focused outreach efforts have been successful due to cooperation between members and Coalition representatives, and 5) the Westport Drain @ Vivian Rd site subwatershed contains a greater percentage of member acreage than Prairie Flower Drain @ Crows Landing Rd (40% vs 23%; respectively).

Upon approval, the Coalition will monitor Prairie Flower Drain @ Crows Landing Rd as a Represented site beginning in October 2018 for the 2019 WY and continue to conduct MPM as necessary. The August 1, 2018 MPU will reference this request and includes the monitoring schedule for constituents determined to need monitoring based on Pesticide Evaluation Protocol results for Westport Drain @ Vivian Rd. In addition, the monitoring schedule for MPM and Represented site monitoring is included for Prairie Flower Drain @ Crows Landing Rd in the 2019 WY MPU.

Sincerely,



Parry Klassen

Executive Director

East San Joaquin Water Quality Coalition